

# HUMAN CAPITAL ANALYTICS TO MANAGE THE ARMY OFFICER POPULATION

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by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

HUMAN CAPITAL ANALYTICS TO MANAGE THE ARMY OFFICER POPULATION, by Captain Adam D. Katz, 80 pages.

The Army Warfighting Challenge #10 identifies the need for agile and adaptive leaders and talent management (TM) has become a topic of discussion to overcome this challenge. The Army developed a task force to improve TM and is incorporating TM initiatives into the Integrated Personnel and Pay System-Army (IPPS-A), but TM policies and procedures still do not leverage proven methods utilized in the civilian sector. This thesis analyzes the use of human capital analytics or talent analytics to determine if the Army would benefit from adding the capability to IPPS-A. The case study method compares civilian sector application to the Army's current TM methods and evaluates the obstacles to implementing Analytics to manage the Army's officer population. Human Capital Analytics has reduced the uncertainty associated with civilian sector HR policies and development expenditure. It provides an evidence basis for decisions affecting the future of a corporation. The Army has a history of time-inconsistent behavior associated with TM and implementing policies with future deleterious effects. Analytics may prevent future time inconsistent behavior and optimize officer TM to achieve an overmatch against future enemies.

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## ACRONYMS

DA	Department of the Army
HCA	Human Capital Analytics
HR	Human Resources
HRC	Human Resources Command
OEMA	Office of Economic and Manpower Analysis
PAM	Pamphlet
TM	Talent Management
TMCOP	Talent Management Concept of Operations
WMI	Workforce Management Initiative



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## CHAPTER 1

### INTRODUCTION

#### Background

The current global security environment is extremely complex and the US faces emerging hybrid threats. There is an acceleration of economic change and technology leading to a global economy and the growth of threats from non-state actors. Furthermore, frequent budget fluctuation results in rapid military personnel end strength adjustments. These conditions heighten the need for a variety of knowledge, skills, and abilities among Soldiers. The Army will need to balance reliance on technology to operate in these complex environments and ensure leaders are available who can operate in a complex, rapidly changing environment. To ensure future success, the Army is exploring all possible methods to achieve overmatch against any potential enemies (Combined Arms Center 2015). To achieve this end state, the Army is evaluating changes to four core functions of talent management (TM). The functions are accession, retention, development, and employment. Optimizing talent management will be key to optimizing individual and collective performance.

#### Talent Management

The Army identifies the need to meet the demand of a complex operating environment, and one of the methods, is to improve human capital or TM. The Combined Arms Center *Talent Management Concept of Operations for force 2025 and Beyond* (TMCOP) documents the Army's intent to improve agility by changing how we recruit, develop, manage and train personnel" (Combined Arms Center 2015, 4). This will

require an integrated approach to recruitment and retention, as well as, personnel policies that foster the development and management of Soldiers to achieve an overmatch. Soldiers will be required to develop creative solutions to complex problems in an ethically and tactically sound manner that is also strategically appropriate. TM is an integral part of how the Army will achieve this end state. Army Training and Doctrine Command (TRADOC) has developed the Army Human Dimension Concept to integrate personnel and training policies. The concept highlights 16 key capabilities and over half of them affect TM initiatives (Combined Arms Center 2015). The Combined Arms Center is currently developing concepts that have the potential to become doctrine. In addition, the Office of Economic and Manpower Affairs (OEMA) at the United States Military Academy has conducted extensive research into TM dating back to 2009, which has served as the foundation for the TMCOP.

Casey Wardynski, David Lyle, and Michael Colarusso of OEMA have written a series of monographs outlining the need for change in the realm of TM. Current Army doctrine suggests that “competence” is the goal of officer development. Wardynski argues current operational experience demonstrates the need for more than competence. The future, unknown operating environment is likely to require even more of Army leaders at the tactical and operational level. Another principle they have identified is that officers are not interchangeable parts, and there is a need to align talent with assignments (Wardynski, Lyle, and Colarusso 2009). They have laid the foundation for potentially revolutionary change in how the Army manages its officer corps. The civilian sector faces similar challenges in a global economy with future uncertainty. Many companies

currently use TM techniques similar to those identified by OEMA to achieve relative advantage over their competitors.

Dr. Salvatore Falletta conducted research to determine how high performing companies utilize a TM concept, called analytics, to make evidence-based Human Resource (HR) decisions that are largely predictive in nature. Of 1000 companies surveyed, there were 220 respondents, representing 47 different industries. Many respondents were fortune 100 companies. Over three fourths of the companies surveyed indicated they had at least one employee dedicated to analytics. Of the fortune 100 companies responding, half of them reported that HR analytics provides input to HR strategy (Falletta 2014). Companies have already put into practice many of the initiatives the Combined Arms Center is researching for potential use in the Army. The largest corporations are demonstrating the benefits of analytics, and they have an ability to predict how their HR policies and procedures affect their employees prior to implementation.

This thesis analyzes the civilian sector's use of human capital analytics (HCA) and its potential to improve TM in the Army's officer corps. More specifically, the thesis will explore the role of HCA in two areas. First, it will evaluate HCA's potential to foster evidence-based change and reduce the risk of unintended consequences. With respect to the Army officer corps, HR policies have second and third order effects, which influence the talent available for years to come. Decisions made without adequate evidence or analysis can have an impact long after the decision authority has retired. HR policies and decisions are crucial to the maintenance of an agile and adaptive force (Wardynski, Lyle, and Colarusso 2010d). Second, this thesis will analyze the ability of HCA to utilize

current labor pool data to look forward to anticipate events and optimize investment. This capability would allow Human Resources Command (HRC) to utilize information on events from the past to determine what is likely to occur in the future. This ability would provide a more complete understanding of the talent resident in the force. Furthermore, HCA will anticipate potential issues to incorporate small course corrections over a period of time rather than a bold shift. Neither of these HCA applications are revolutionary in the civilian sector. Companies with similar geographic dispersion, and multiple different labor pools with varying degrees of talent use HCA to increase retention, reduce HR costs, and impact talent (Boudreau and Ramstad 2007).

Although the Army has a method of managing officer careers, the data available on each individual officer provides almost no insight on the holistic perspective of the officer (Wardynski, Lyle, and Colarusso 2010). Each individual officer possesses unique talents and experiences not reflected in their officer record briefs or evaluations. It is possible that civilian run websites, such as LinkedIn or Monster, have more granular knowledge of an officer's talents, experiences, and goals than the Army. Yet, this information is not available to the assignment manager responsible for matching Army officer talents to validated requisitions or the dynamic working environment they will experience (Wardynski, Lyle, and Colarusso 2010).

The Army has identified the need to develop leaders capable of working in dynamic environments in the 10th Warfighting Challenge. This challenge briefly outlines the need for agile and adaptive leaders. It also highlights a unified strategy to measure leader capabilities and compare those results to needs in the force (Center for Army Leadership 2015). Similarly, the TMCOP put the need for agile and adaptive leaders into

strategic context. The US faces evolving threats by a diverse group of enemies, who have already demonstrated a willingness to challenge our interests in unconventional ways. The strategic environment is shifting rapidly. For the Army to succeed in this environment, it is vital the Army retains officers with a diversity of knowledge, skills, and abilities (Combined Arms Center 2015).

The TMCOP highlights the challenge in identifying indicators associated with excellent leadership. Leaders on the task force are working to determine better ways to measure and identify talent. Without precise indicators of talent, it is not possible to identify leaders with unique abilities or match officers to an optimal career path. This capability is essential to the success of any TM program. It is equally important to have an HR information system that provides senior leaders with this information, in order to optimize strategy decisions associated with the human capital in the Army (Combined Arms Center 2015). Civilian organizations are effectively using analytics to reduce the risk associated with strategy decisions to great effect (Fitz-Enz 2006).

### Research Question

The purpose of this thesis is to determine if the Army would benefit from the use of HCA and if policies and behaviors that currently exist affect the implementation of an analytics program. So, the primary research question is: can the Army use human capital analytics to guide policy and optimize their investment into the officer corps?

### Secondary Questions

This thesis will also examine the following secondary research questions in order to provide a foundation for recommendations.

1. How has the civilian sector utilized analytics to improve their management of human capital?
2. What are the limitations of analytics use in the civilian sector?
3. How would Army HR policy affect the use of analytics if implemented?

### Definitions and Terms

This thesis covers several terms unique to TM and analytics that require definition to provide context. The research and analysis will utilize terms that may have a different definition depending on the source. These definitions will provide the reader with the appropriate foundation for understanding the intent of the research.

**Human Capital:** Claudia Goldin defines human capital as “the stock of skills that the labor force possesses” (Goldin 2014, 1). The term’s use in research occurs with variance in definition. This succinct definition lays the foundation for OEMA’s expanded definition of talent, which they view as synonymous to human capital.

**Talent:** OEMA provides the most applicable definition of talent, which is “the unique intersection of skills, knowledge, and behaviors in every person. Talent represents far more than the training, education, and experiences provided by the Army. The fullness of each person’s life experience, to include investments they have made in themselves, personal and familial relationships (networks), ethnographic and demographic background, preferences, hobbies, travel, personality, learning style, education, and a myriad number of other factors that better suit them to some development or employment opportunities than others” (Talent Management Strategy 2016, 6). It is important to note that talent and human capital are synonymous to OEMA



and to the Combined Arms Center. Various sources, both civilian and military, use the terms interchangeably.

Human Capital Analytics: an area in the field of analytics that integrates talent information and the strategy of the organization. It allows organizational leaders to understand where impact is occurring based on policy and procedures, and HCA make evidence based, strategy decisions regarding human capital management. The goal is to improve employee and organizational performance by optimizing investment in human capital (Pease, Byerly, and Fitz-enz 2013).

Continuum of Human Capital Analytics: the continuum is a model developed by Gene Pease, Dr. Boyce Byerly, and Dr. Jac Fitz-enz to describe how organizations collect and act on human capital information. The continuum's first, and least refined step, is the use of best practices or anecdotes from other organizations. Optimization is on the other end of the continuum, and results in the ability to predict HR policy and strategy effects. Each respective step in the continuum is progressively more difficult for an organization to achieve, but the perspective of the organization improves with each step (Pease, Byerly, and Fitz-enz 2013). Assessment of HR programs in chapter 4 utilizes the continuum during the case study analysis. See the literature review for a more detailed description of each step on the continuum.

### Scope

The scope of this thesis is limited to a critical analysis of HCA use in the civilian sector and an assessment of its potential to improve TM of Army officers. The research uses the case study methodology to evaluate and assess how effectively the civilian sector uses or used HCA at IBM and Chrysler. The third case assesses the Army's current TM

practice. Analysis will evaluate whether HCA would be an effective tool to improve the assessment, retention, development, and employment of Army officers. Due to the unique nature of the Army's talent and training requirements, some of the benefits of analytics may not directly apply to the Army. Chapter 4 will use Department of the Army (DA) Pamphlet (PAM) 600-3 requirements to screen the civilian cases and evaluate their applicability to the Army. This study focuses on the potential strengths, weaknesses, and potential opportunities that HCA offers the management of the Army officer corps.

### Limitations

The research for this thesis regarding the Army's TM initiatives and current HR practices are limited to what is available open source. As will be shown in the literature review, limited information is available on current officer management practices. OEMA's assessment of current Army officer management procedures will provide the basis for evaluation in this thesis.

### Delimitations

The research for this thesis is limited to the evaluation of HCA in the management of the Army officer corps. The TMCOP identifies many promising leads to improve TM. Throughout this thesis, the Combined Arms Center's concept serves as a guide for the objectives of the Army's TM program to optimize individual and team performance of Army leaders, as well as, integrate and synchronize human dimension initiatives.

This thesis discusses HCA's effects on the following areas: accession, development, employment, and retention of Army officers. The fifth area of workforce planning, identified by the TMCOP, is beyond the scope of this thesis, due to the

multitude of factors beyond the Army's control that impact its end strength. However, Army policies and procedures largely influence effects on the other four areas identified in the TMCOP. These areas will serve as a focus for TM techniques in this thesis.

### Chapter Summary

The Army faces a rapidly changing environment and must produce and employ agile and adaptive leaders to face these challenges. TM is key to success in this environment and the Army has identified several issues associated with its TM practices and is currently developing solutions. The next chapter reviews the issues identified by OEMA and the Combined Arms Center as well as some civilian sector methods of TM.

## CHAPTER 2

### LITERATURE REVIEW

#### Chapter Introduction

Determining the answer to the question regarding the possible application of HCA to guide Army policy and optimize investment in the officer corps requires the review of applicable literature. The purpose of this review is to provide a foundation to evaluate the Army's ability to use HCA to guide policy. This literature review covers the Army's identification of issues and challenges associated with TM and adaptation to meet future requirements. OEMA's efforts provide the foundation for the Army's TM program and ultimately the TMCOP. It also provides the foundation for the Army's HR challenge during the analysis of the Army HR program in chapter 4. The two civilian sector cases contain a synopsis of their individual HR challenges to explain how they used HCA in their operations. The review also establishes the definition of each step in the HCA continuum as a means of evaluation in chapter 4.

#### Army Warfighting Challenge #10

Army Warfighting Challenge #10 recognizes the need for a comprehensive effort to develop and manage agile, adaptive, and innovative leaders capable of succeeding in dynamic and complex environments. The leaders of the force of 2025-2045 are currently serving. These leaders must be capable of organizing and employing mission command during joint and combined arms operations now, while gaining the breadth of competencies that will serve them as successful future colonels and generals (Center for

Army Leadership 2015). The Army will achieve this by creating professional military education and training that fosters agile leaders who are capable of innovation.

Unfortunately, leadership is difficult to assess, and current methods do not fully describe a leader's potential. As a result, the Center for Army Leadership is conducting research to create a better understanding of leadership and develop a more precise assessment method. The proposed integrated learning plan recommends broad based collection from annual surveys to Observer Controller/Trainer feedback from combat training center rotations (Center for Army Leadership 2015).

### Talent Management

The United States Military Academy's OEMA, conducted original research in TM and contributed greatly to the current TM operating concept. Furthermore, OEMA created models for understanding the process of TM in the Army. Their monographs highlight the need for changes in evaluation and management of human capital in the Army. Officers find creative solutions to unique problem sets, operate inside the intent of a higher command with minimal guidance, and adapt to new environments and doctrine throughout their careers. Leaders require a depth of experience for their personal and unit success. These requirements demand more than just competent officers – they demand talented officers (Wardynski, Lyle, and Colarusso 2009). OEMA defines talent as the “intersection of three dimensions—skills, knowledge, and behaviors—that create an optimal level of individual performance, provided the individual is employed within their talent set” (Wardynski, Lyle, Colarusso 2009a, v). Figure 1 is OEMA's human capital model with the pillars of TM in addition to the four focus areas discussed later: access, retain, develop, and employ.

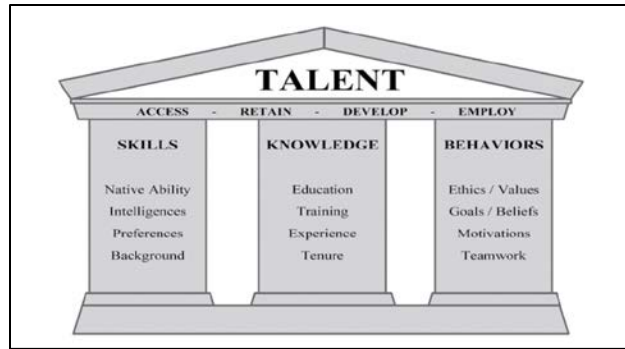


Figure 1. Human Capital Model

*Source:* Casey Wardynski, David S. Lyle, and Michael J. Colarusso, “Talent: Implications for a U.S. Army Officer Corps Strategy” (Monograph, Strategic Studies Institute, Carlisle, PA, 2009).

To affect TM, the Army must recognize there is diversity among officers, and they possess a unique distribution of knowledge, skills, and behaviors. Equally important is the recognition and understanding that the Army requires diverse talent to be successful in a complex environment. This will enable the Army to abandon industrial era HR practices that treat every officer as an interchangeable part on a prescribed pathway through education, assignment, and promotion. This is the first step of achieving improved TM, but there are several other methods to optimize TM (Wardynski, Lyle, and Colarusso 2009a).

The true purpose of TM is to contribute to the success of the Army’s strategy and achieve its objectives. This can only be achieved by ensuring there are an equal number of billets as officers. If officers are forced to wait for key and developmental or rewarding assignments, they will leave the Army for the civilian sector. The assignment process also has an effect on job satisfaction and alignment. The Army currently uses an industrial era model that is not responsive to change. If small, steady changes occur to

this model and boards and branch managers recognize officers for their specific talents, then there is a potential to produce radical results (Wardynski, Lyle, and Colarusso 2009a).

These changes will be essential to the success of the Army. OEMA found “compelling evidence that the U.S. Army’s Officer Corps will be unequal to future demands unless substantive management changes are made” (Wardynski, Lyle, and Colarusso 2009b, v). Currently, the all-volunteer Army is using draft-era methods for managing personnel. The all-volunteer system provides an opportunity to manage talent similar to the civilian sector. One important opportunity the volunteer force provides is the opportunity to screen and control accession.

#### Accession

Through accession, the Army has an opportunity to identify and select officers with an aptitude for leadership, problem solving, and agility. Screening officers prior to their acceptance provides the greatest value. Accession determines the amount of time and money required to train the selectees. A failure to conduct this step correctly, results in greater resources spent developing, employing, and retaining future officers. In other aspects of TM, resources spent in one area result in a shortage in another. This is not true with accessions, and it can result in a net gain to the strength of the officer corps. Selection during accession has the potential to be self-feeding, as the reputation of the program improves, they may attract greater talent (Wardynski, Lyle, and Colarusso 2009a).

During the accession process, officer-training organizations, such as Reserve Officer Training Corps and Officer Candidate School, have an opportunity to cull their

trainees based off increased assessment information. Culling the least performing selectees increases the overall average talent and reduces future cost associated with retraining. Excessive culling can indicate a failure to screen candidates adequately. The importance of this step in the TM process cannot be overstated. Evaluators of officers in training assess cadets and candidates for more than their potential as platoon leaders; these young men and women represent the future field grade and general officers leading the Army. It is essential each officer must retain the capability to meet unknowable strategic requirements 25 years after they are commissioned (Wardynski, Lyle, and Colarusso 2010a). The Army cannot hire talent at the mid-career level due to the knowledge and skill requirements to serve in a field grade billet. Therefore, the Army must not discount the importance of accessions, because the process has potential enterprise level implications in the future (Wardynski, Lyle, and Colarusso 2010b).

### Officer Development

The Army has to maximize the benefit gained through careful accessions by developing officers to reach their maximum potential. Although the Army is capable of developing talents in the officer corps, it must always strive to maximize training effect in the shortest period with the least amount of financial resources possible. Officers have the monumental responsibility for a platoon of 30-40 Soldiers at a very young age. Most people never have the opportunity for this level of responsibility, let alone in a combat situation. Soldiers are entitled to the very best leaders the nation has to offer (Wardynski, Lyle, and Colarusso 2010b).

Developing the very best is vitally important because of limited lateral entry. When a civilian organization realizes it is lacking a certain skillset, it has the ability to



hire that talent into the company. The Army lacks this flexibility and must develop talent from within. This can be time consuming and decreases the flexibility of the force. As a respite however, Army officers are receptive to development, and in most cases, seek out necessary training (Wardynski, Lyle, and Colarusso 2010b).

In order to increase flexibility and reduce lag associated with the development of training, officers need to deepen and broaden their skillsets. However, the Army's guidance and approach to training is rigid and limits these broadening opportunities. Officers must meet discrete requirements to remain competitive for promotion, leading to a relatively narrow path to success. The DA PAM 600-3 outlines the requirements for each officer to remain competitive for promotion. The basis for success depends on their service in a limited number of key and developmental billets (Wardynski, Lyle, and Colarusso 2010b).

Any investment in development will be less efficacious if the Army fails to track it across the force and over time. The information available to HRC does not retain a depth of information about each officer. Although the Army does collect information and present it clearly in a concise manner on the officer record brief, the information is insufficient to understand the uniqueness of each individual officer. Data contained on an officer record brief relates information about assignment history and length, skill identifiers, promotion dates, and civilian education, but it cannot present an officer's interests, their foreign travel, or certifications. The officer record brief contains accounting data necessary to ensure branch managers assign an officer to the correct designated checkpoint in their career, but it fails to encompass a breadth and depth of information (Wardynski, Lyle, and Colarusso 2010b).

## Employment

Employment is the third aspect of TM OEMA explores in their monograph series, and it is at the core of the human capital model. The Army reaps the benefits on their investment for accessions and development when officers fill the billets that match their knowledge, skills, and abilities. This is also the principal area where feudal era practices and a prioritization of “fairness” prevent precise talent matching. Since the inception of the all-volunteer Army, few changes have been made to the way assignments are managed, and they treat every officer as an interchangeable part in a large machine. A lack of detailed information regarding an officer’s background, civilian qualifications, or career goals compounds the issue. If more talent information were available to branch managers, the Army could improve their return on an accession and development investment (Wardynski, Lyle, and Colarusso 2010c).

Today’s labor market, grounded in the information age collaboration, allows employees to leave at will. This is especially true if the employee feels they have minimal input in their path. The Army competes with the civilian sector to retain officers, and the employment or assignment process is critical to their decision. Officers sometimes view HRC as dictating their assignment rather than the collaborating with their assignment manager to determine the best fit. Furthermore, branch managers have considerable authority and that leaves the opportunity for personal bias to exist (Wardynski, Lyle, and Colarusso 2010c). With greater information, branch managers will have the opportunity to make precise talent matches and minimize their potential personal bias.

HRC applies assignment “fairness” based upon a few different criteria. Branch managers often select officers recently returning from a deployment for a “take a knee”

assignment in a TDA or other non-deployable unit, regardless of the officer's preference. When surveyed however, only six percent of Soldiers reported the possibility of a deployment as a factor in choosing their next assignment. This gap in understanding the talent pool provides an opportunity for marked improvement. A market-based system would encourage officers and HRC to share information about themselves and assignments respectively. As a proof of concept, OEMA developed the *Army Green Pages*, a web 2.0 site, similar to LinkedIn. It allowed Army Engineer branch officers an opportunity to share their specific qualifications and interests. It also provided an opportunity for engineers to contact to senior officers and peers for guidance. This forum enabled branch managers to achieve a greater understanding of the talent present in the population they managed. It resulted in officers sharing previously unknown qualifications, their goals, and it made granular information about open jobs available to the labor pool. It allowed officers and HRC to see, not only what talent is currently in demand, but what talents are desired in the future. This would allow officers to tailor their development to meet talent demands. *The Green Pages* balance information availability to both parties and allows market forces to prevail. This program resulted in the development of similar system available to USMA Cadets to assist in their selection of branches (Wardynski, Lyle, and Colarusso 2010c). This collaboration is possible using currently available technologies.

HRC is still using web applications that pale in comparison to the civilian sector. Again, HRC possesses data on officers, but it does not represent the officer as a whole person. To match talent, HRC needs decision support data that empowers officers and units to view the same data. This would allow HRC to act as an advocate for the officer,

rather than treat them as interchangeable parts and expect them to perform in any assignment. Market forces have demonstrated their value in our economy and in limited segments of the military. Applying a market design to the assignments process, may increase the opportunity for talent match and facilitate labor pool depth (Wardynski, Lyle, and Colarusso 2010c).

Proper talent match is essential to officer employment and supports other aspects of TM. Talent matching through market forces would increase diversity and promote development in recognized gaps. Market forces after 9-11 motivated freshman at USMA to major in Middle Eastern Studies at an increased rate, due to their perception of its need. A few years later, the number of cadets majoring in Middle Eastern Studies returned to pre-9-11 rates. Market forces can improve talent overall and bolster productivity. It will also encourage the most talented officers to accept the opportunity cost of remaining in the military past their active duty service obligation (ADSO) (Wardynski, Lyle, and Colarusso 2010c).

### Officer Retention

The fourth focus area for OEMA's monograph series is officer retention. Retention is critical to ensure a return on the Army's investment into its future. As of 2010, the Army was experiencing significant, unwanted reduction in officer retention rates. Wardynski, Lyle, and Colarusso explain how the Army's reaction to this talent leakage exacerbated the issue. The shortsighted solutions the Army implemented will have effects 30 years in the future. The Army must focus on retaining the most talented officers and culling the officers without the appropriate knowledge, skills, and behaviors. The Army is constantly competing with the civilian labor market, and they must

implement policies and incentivize the officers with the talents in greatest demand to stay (Wardynski, Lyle, and Colarusso 2010d).

The Army fought this retention issue in two ways. First, officers from year groups 1999-2005 were given the opportunity to take a lump sum cash payment for an additional three years of service. The Army made no consideration for officer talent when offering the bonus, because the focus was on retaining the greatest number of officers. Payment of between \$25,000 and \$35,000 was not enough to prevent those with the greatest opportunities, and potentially the greatest talent, from leaving the military. The effect it did have was to retain officers with potentially sub optimal talent and increase talent mismatches in the force. Furthermore, 77 percent of the officers that received the bonus, intended to remain in the military for another three years regardless of the bonus. Talent mismatches in leadership roles have a secondary deleterious effect. Junior officers working for officers whose talents mismatch the requirements become dissatisfied. This encourages an unintended second order effect. As a result, lieutenants working for lackluster leaders choose to leave the Army at an increased rate (Wardynski, Lyle, and Colarusso 2010d).

The Army compounded the problem by accessing and promoting more officers in an attempt to balance supply and demand. This also produced similar, unintended effects. Increased promotion rates result in unprepared officers attaining leadership roles, which they were unqualified to accept. Unqualified leaders drive talented junior officers to the civilian employment market. Second, the over accession of lieutenants does not account for the limited number of key and developmental assignments available. Key and developmental assignments have the greatest potential to further an officer's talent.

Without these assignments, an officer is potentially not prepared to progress to their next responsibility or rank. Lieutenants are most often required to serve as a platoon leader for this progression. Not only is this a key assignment, lieutenants tend to enjoy their time as platoon leaders. Over accessing lieutenants does not allow each officer to spend enough time to be fully developed by the opportunity of serving as a platoon leader. As a result, officers with the greatest opportunity cost to remain in the Army, and likely the most talented, are encouraged to leave (Wardynski, Lyle, and Colarusso 2010d).

Both these are examples of time inconsistent behavior and short-term solutions, which fail to account for future consequences. The Army's human resource model is extremely susceptible to these behaviors because it takes a full 30 years before the consequences of policy or an action take effect. Any mistakes made today will take an entire generation of officers to rectify. In order to prevent this sort of behavior, sound policies and theories must guide officer policy (Wardynski, Lyle, and Colarusso 2010d).

Overall, the policies implemented in an effort to retain talent have resulted in unintended consequences, which have created secondary issues that reduce retention rates and result in dissatisfaction in the officer corps. The Army could have implemented targeted retention initiatives to increase the overall talent resident in the force. The civilian labor market cannot be ignored as an influence in an officer's decision to stay or leave. Policies and retention initiatives must consider this and appropriate development and employment opportunities must be offered, in order for the Army to meet the nation's needs (Wardynski, Lyle, and Colarusso 2010d).

## Human Capital Analytics

Analytics is the combination of both art and science. The artistic portion of analytics is a way of viewing a situation, and the scientific aspect guides action to affect that situation. Human Capital Analytics (HCA) is the process of deconstructing a network of information with the objective of greater understanding. Analytics uses a logical approach to dissect complex human behavior, and it determines the interdependence of measurable variables. Statistics are often helpful, but collecting statistics and arranging them in a dashboard does not constitute analytics. The predictive capability analytics provides, offers a method to reduce risk associated with applying HR policy (Pease, Byerly, and Fitz-enz 2013, 16-20).

HCA is the process of gathering, organizing, and interpreting data to measure the impact of human resource policies and decisions. The ultimate goal is optimization of human resource policies and procedures. HCA may also allow an organization to understand how HR policies will affect the labor pool in the future. Prediction of future impact is key to the process, and it allows HR departments to become strategic partners in the management of an organization. Analytics is proven in other aspects of business, most notably: insurance, retail, travel, health care, advertising, and financial services. The fact is, companies have been predicting the behavior of populations in a dynamic environment for years. Companies use analytics to explain and predict human behavior, and it can guide the development of policies and human capital investments to achieve optimal results (Pease, Byerly, and Fitz-enz 2013).

Human capital analytics reduces the risk associated with important talent decisions. When companies evaluate their talent pipeline or determine what are critical

jobs or skills required to succeed, their explanation and understanding is frequently opinion based. Companies do not succeed by allowing accountants and financial managers to have their own theories on cash flow or debt ratio. It is often acceptable for the HR department to apply the latest fad or a motivational speaker's personal experience to a company's HR policies. Decision science reduces ambiguity and risk associated with implementing policy and integrating HR with a company's strategy. It is widely recognized how important TM is to an organization, yet organizational leaders know little about how their talent decisions drive organizational success or failure. Detailed processes and procedures exist in finance, operations, and accounting reduces uncertainty in these fields. Human capital analytics offers precision in talent decisions that can allow HR to become a strategic discipline (Pease, Byerly, and Fitz-enz 2013).

Analytics overall can improve decision-making processes and help avoid decision biases. Unfortunately, decision makers frequently ignore this information and fail to use available analysis, or the resultant information is not presented in a manner to reduce decision-making time. Very few organizations understand or track the results of their decisions (Davenport 2013). HCA provides an opportunity to avoid these pitfalls and optimize the way an organization manages human capital.

### The Human Capital Analytics Continuum

The human capital analytics continuum is a model used to categorize how an organization collects and reports data. At the lowest, or most rudimentary, end of the spectrum is the use of anecdotes. Optimization is the goal of analytics, and it allows executives to predict, with some level of certainty, how their decisions will affect their benchmarks. The use of anecdotes can be described as "success case methodology," or



the application of practices that work for another company to your own operation.

Scorecards and dashboards are the next higher step on the continuum, and they utilize the collection of information from automated systems. They track consequences from business practices after implementation. A dashboard is similar to a scorecard, but has displayed information distilled to the most important indicators so executives can view the most pertinent information in a short duration. Benchmarking is a widely popular method businesses use to track success or failure in a given area. These include training levels, turnover rates, and salary. Although benchmarking is a further step in the right direction, it fails to explain what the data means to the company or why turnover has increased. Any number of factors could affect a given benchmark, without analysis the data is less useful to guide policy.

Correlation and causation represent the steps with the greatest improvement in analysis and utility for a company. For the purpose of analytics, correlation is the application of descriptive statistics that connect action with a corresponding fluctuation on a scorecard or benchmark. Questions associated with correlation might be “are the trained employees being retained at a greater rate than untrained ones?” (Pease, Byerly, and Fitz-enz 2013, 18). Although training and retention may be connected, causality can only be assigned after the events show a statistically significant connection, one event precedes the other (training precedes the increase in retention), and other plausible causes have been ruled out. Without applying these steps, policy makers cannot assign causation to related events (Pease, Byerly, and Fitz-enz 2013, 19-20).

The goal of human capital analytics is to achieve the final stage, which is optimization. It means a company has the ability to understand where impact is occurring

based on HR decisions and policies. This allows HR professionals to show executives how training affects sales or tenure. Once an organization achieves optimization it will enable evidence-based decisions and risk calculations. These “predictive analytics” optimize investment into a workforce. Although all steps in the continuum are important, rigorous dedication to achieving optimization can allow a company or organization to save time and money, giving them an edge against their competition (Pease, Byerly, and Fitz-enz 2013, 20).

### Chapter Summary

This chapter reviews the challenges identified by the Combined Arms Center and OEMA as well as methods the civilian sector implements to overcome the challenge of applying an evidence basis for HR decision making. In the next chapter, a review of the case study method, used by this thesis, provides a basis to evaluate both the Army and civilian HR programs.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### Chapter Introduction

This chapter outlines the method used to achieve the purpose of the study and answer the primary research question: How can the Army use human capital analytics to guide policy and optimize their investment into the officer corps. The research will evaluate the effectiveness of civilian sector methods of implementing analytics to optimize their investments in human capital and compete effectively in their business sector. Through analysis, this thesis intends to identify how the Army could implement analytics to guide policy and manage talent, within the limitations of the unique nature of the Army's regulations and requirements.

#### Research Process

The research and analysis of this thesis utilizes five steps to evaluate how HCA affects both International Business Machines (IBM) and Chrysler. The third case is analysis of the Army's TM practices. First, a review of the Combined Arms Center's TMCOP was conducted in the literature review to provide a framework for evaluation. The TMCOP identified five core functions of TM. This thesis covers four of those areas where HCA is likely to have impact. The four areas are the accession, development, employment, and retention of Army officers. The fifth area identified, workforce planning, is beyond the scope of this thesis due to the number of factors that influence the military's end strength (Combined Arms Center 2015). Second, the HCA continuum, outlined in chapter 2, establishes a standard to assess both the civilian sector practices

and the Army's HR processes. Step three, will evaluate the performance of each case in the four core functions identified by the TMCOP. The fourth step evaluates each of the cases against the HCA continuum to assess how effective each HR program integrates human capital information and strategy to determine where impact will result from an action or new policy. Finally, a comparison of the cases illuminates areas of success and shortcomings. This step creates a foundation for recommendations in chapter 5.

### Data Collection Methods

The case study approach provided the most applicable method to compare human capital management programs in each business and the Army. Robert Yin highlights the ability of case studies to conduct qualitative research in a real-world environment. Case studies are most beneficial when evaluating human interaction in a contextual environment. This dynamic environment is difficult to reproduce in a controlled setting that only allows for research on a limited number of variables. Furthermore, an experimental environment may control for factors affecting behavior and results. Another benefit is the ability to evaluate multiple sources and conduct triangulation to increase the credibility (Yin 2011).

Case studies are particularly useful in informing policymaker's decisions in a strictly defined setting. This is at the cost of broad theoretical knowledge, but applicable in the case of HCA (Yin 2011). It accounts for the complex, human centric, volatile nature of HR policy.

## Research Methodology

The intent of the data collection is to determine how applicable HCA techniques and methods would apply for the Army to manage their officer population and provide an objective analytical review. Combined with the goals of the TMCOP in the core functions, analysis of how Army policy may affect the implementation of HCA will provide resolution to answer the third secondary research question. Prior to the use of the stepwise research method, a review of the two civilian organization's HR challenges provides context for the application of a new practice. Chapter 2 provides a similar review of the Army's HR practices.

### Step 1: Summary of HR Challenge

In this step, a summary of the organization's HR challenge describes the issues the organization faced. This is necessary to understand how their TM program affected their organization in steps two through four. This thesis reviews some of the Army's challenges in the literature review, but more details are located in step one of the research process in chapter 4. The civilian cases are in two different business sectors and bear some similarities and differences to the Army. The summary covers these factors to establish a basis for step five, the comparison of cases.




### Step 2: HCA Continuum

The HCA continuum is a method of describing how an organization collects information and utilizes it to make decisions. Pease, Byerly, and Fitz-enz developed the continuum to describe the spectrum of HR information collection and utilization. On the lowest end of the spectrum, leaders rely on anecdotes as support in decision-making.

They further describe this as “success case methodology”. On the highest end of the spectrum, optimization results from having intelligence to understand what effect an action will have and how it will affect an organization. Optimization only results from factor analysis, the establishment of causation, and an understanding of the factors that mediate impact (Pease, Byerly, and Fitz-enz 2013).

### Step 3: Core HR Functions

Evaluation of each HR program will use the four core functions of the TMCOP. Each program receives a grade in each of the four areas. The criteria exist in three levels, and are depicted in table 1. A “minus” sign indicates the HR program has no measurable effect in that particular core function. Second, a circle shows the HR program improves the organization’s ability to improve the core function, but in a peripheral manner. Third, a “plus” sign indicates the HR program demonstrating direct improvement in that specific core function.

Table 1. M Core Function			
	Rating		
TM Core function			
Access	The "minus" sign indicates this HR program has no measurable effect on the TM core function	The circle indicates this HR program improves the organization's ability to affect the TM core function in a peripheral manner but not directly	The "plus" sign indicates this HR program causes direct improvement in this TM core function
Develop			
Employ			
Retain			

Source: Created by author.

#### Step 4: HCA Continuum and TM COP

The HCA continuum and TM concept combined, will provide a holistic review of each case. The TM concept does cover topics similar to HCA, but lacks a model for measuring the validity of any action or providing a way to determine a program's success or failure. Therefore, the HCA continuum provides the necessary measurement tool (Pease, Byerly, and Fitz-enz 2013). This step combines the evaluation results of both steps two and three with a specific assessment of each program in the four measured areas, using the HCA continuum as a measurement. Accessions, development, employment, and retention will each receive an individual assessment along the HCA spectrum. Table 2 shows the combination of both the Army's TM core functions and the HCA continuum.

Table 2. Example Human Capital Analytics Continuum							
Core Function	Anecdotes	Scorecards	Benchmarks	Correlation	Causation	Predictive Analysis	Optimization
Access							
Develop							
Employ							
Retain							

*Source:* Created by author.

#### Step 5: Program Comparison

Once each of the programs are evaluated against the models, both from the perspective of the TMCOP and the HCA continuum, each program will be compared to

one another. This will assist in determining what practices the civilian sector uses may apply to the Army's TM initiatives. Also in this step, an analysis of the Army assignment process and regulation will determine if any significant limitations to the application of HCA exist in the Army's case. This discussion answers the third, secondary research question and must be resolved to answer the primary research question.

### Chapter Summary

The case study research method facilitates the analysis of disparate HR programs. Specifically, step three and four use the Army's focus areas and the civilian HCA continuum to measure the effectiveness of each HR program. The next chapter contains the analysis of each HR program with this method and a determination of how the Army's current policies might affect the employment of a new program including HCA.



## CHAPTER 4

### ANALYSIS

#### Chapter Introduction

IBM is the first of the three cases, and its challenges bear similarity to the challenges faced by the Army. It is an organization with over 300 thousand employees with global offices and customers. Their operating environment changed and their business model no longer applied. IBM faced the challenge with a new vision and reorganization. Ultimately, executives desired the integration of their HR infrastructure and the businesses' strategy.

#### IBM Step 1

IBM was one of the first companies to produce computers for business use, and the company enjoyed complete dominance in this field. Competition, globalization and an associated lack of adaptation threatened the company with bankruptcy. The only way for IBM to overcome this was to integrate their global assets to maximize communication and productivity. The CEO, Sam Palmisano, developed the term “globally integrated enterprise” to describe the venture. The foundation of this enterprise is human capital and HR management (Boudreau 2011).

Employees at IBM were qualified and motivated, but they lacked flexibility to meet the customer's needs. Customers wanted custom solutions that benefit their organizations across the world. Employees in the UK used different language to describe the nature of work than a similar department in San Francisco. The lack of precision work description prevented resource sharing. This led to a poor utilization rate of IBM's

workforce. The utilization rate is the ratio of billable hours to the number of available hours, and IBM had a low utilization rate compared to their competition. IBM needed the ability to see the talent resident in their workforce, regardless of location, and to deploy that talent to the worksite. Employees needed to move virtually or physically to fill available hours and prevent the need for contractor use when resident talent was idle (Boudreau 2011).

Even though IBM had modern TM systems, the language each country, or department, used to describe work was different, compounding the lack of utilization. Employees only bridged this gap if they knew someone in another location who could provide employees with the required talent. IBM forced managers to describe, in precise language, what they meant when they request a specific skill or need a task complete. Some describe this as a skills inventory, or competency based system that is most commonly applied in technically based employment such as manufacturing. IBM solved this problem using, what they coined as, the Workforce Management Initiative (WMI). According to IBMs executives, there are four key tasks associated with the initiative's success. The first task is to develop and implement a common language for talent resources. Second, IBM had to integrate business strategy utilizing the talent based language. Third, human resource professionals needed to inventory available talent in a central location. Finally, IBM had to create the ability to match talent supply against the demand, while identifying gaps and excesses. IBM accessed this initiative would result in greater utilization rates and profitability (Boudreau 2011).

## IBM Step 2

IBM's Global Talent Management strategy achieves optimization in the HCA continuum. The IBM CEO, Sam Palmisano, created a vision and tasked the HR department at IBM to develop a plan to put his vision to work. The cost estimation to implement the IT portion of the Workforce Management Initiative was 100 million dollars over a five to seven year period, but the return on investment was unforeseen and occurred early on during the implementation process (Boudreau 2011). Ultimately, IBM successfully designed and implemented HR infrastructure that allowed senior leadership the ability to understand how actions are likely to affect the workforce and their bottom line.

To achieve optimization, IBM had to identify how their current TM system worked, and how it would work in the future, integrated into their strategy. Following their analysis, they identified what prevented the realization of their desired system. The CEO developed an open forum where 50,000 employees provided feedback. He read all of their feedback and understood a gap existed between talent requirements and talent availability (Boudreau 2011). IBM bridged that gap in four ways that optimized their ability to link strategy and TM.

First, IBM optimized their resource management by developing an inventory of skills and talent within the company. The company could no longer afford underutilization of resident talent. The greatest obstacle to optimization of their resources was the lack of a common language to describe work between departments and around the globe. This foundational step made it possible for the integration of talent supply and demand. IBM envisioned a talent supply system similar to supply chain frameworks used

in operations management. Ultimately, IBM developed a job taxonomy system, similar to the biological classification of organisms, placing jobs into layers of categories based on common definitions of work requirements. This reduced overlap of similar requirements and allowed the company to see exactly what talent was resident in the company. This system became so efficient, over 350,000 employees fit into 300 unique categories. The taxonomy and common language allowed HR and leaders at IBM to visualize their available talent and reduce overlap (Boudreau 2011).

The taxonomy and common language enabled IBM to become globally oriented. IBM's employees worked across the globe prior to the WMI, but the lack of a common language and different job descriptions complicated their underutilization problem. With a common language, talent became mobile, both physically and virtually. Decision science associated with a supply chain uses stock-keeping-unit numbers, or SKUs, that allow a manager to identify items and use the same identifier throughout a process. Taxonomy allows managers across the globe to use a common language to identify talent need, and request it using the same language. This allowed common requests for external support to receive expedited approval and further reduce overhead (Boudreau 2011). IBM did experience challenges associated with the fact that people are not widgets in a supply chain and human judgment is an important aspect of linking talent demand to talent supply. They balanced the human dimension and the decision science appropriately to optimize utilization. IBM improved underutilization rates by nine percent between 2003 and 2008 (Boudreau 2011). The common language and taxonomy used to describe jobs and talent mitigated one of IBM's greatest obstacles to profitability and provided a baseline for continued refinement and learning.

IBM integrated strategy with the WMI through an emphasis placed on learning about their business and their employees. The WMI provided insights based on current needs and allowed managers to guide employees down career paths that are likely to be required in the future. Based on WMI data and strategic information, IBM could prevent employees from spending time and energy on a career path projected to be obsolete. Instead, managers are able to use data to show employees where they would be most useful to the company in the future, and combine that with a personal assessment of that employee's ability. Employees can create a multi-year development plan, integrated with the company's and their own interests. This is possible because users, managers, and senior leaders constantly update the WMI. Departments that are in demand grow, while underutilized areas shrink (Boudreau 2011). This adaptation provides IBM the best opportunity to remain competitive in the future. IBM has a distinct advantage based on the integration of strategy and constant bottom up refinement. They are constantly learning about themselves, and their employees, creating a feedback loop maximizing development and preventing future gaps.

The fourth aspect of the WMI vision is supplier and vendor management. IBM had far fewer contractors than full time employees in 2005, yet they saw significant payoff by optimizing the use of suppliers and vendors. IBM forced vendors to use the same language as the WMI to enter a contract with IBM. Vendors that refused did not receive contracts from IBM. The language that contractors use to describe their capabilities prior to the WMI was a source of waste. Contractors were not supplying what IBM expected because of miscommunication. Managers had greater awareness of what a contractor was to provide, and senior leaders were able to justify the use of outside talent








with an understanding of what contractors provided. Because contractors used the same language, IBM could also determine if that talent or service was available internally. This resulted in the cancellation of unnecessary purchase orders when contractor talent and resident talent overlapped. The common language enabled data collection on what talents are currently required, both inside and outside the company. This data helps forecast demand signals across the talent supply chain and furthers employee development. Even though the number of employees outnumbered the contractors, IBM saw a significant savings because of the common language applied to vendors. The language increased specificity when requesting contract support and reduced administrative overhead (Boudreau 2011).

Along with savings, the WMI also presented significant drawbacks that forced IBM to consider pay scales in different countries and the implications of collecting employee information. Talent mobility allows an employee to work in another country and may result in hardship compensation not afforded to residents of that country. When taking into account employee talent and skills, a disparity may develop between a “foreigner” receiving more compensation for the same job as native employees. In addition, some countries view privacy differently than the US. The pervasive nature of WMI may be unacceptable to certain countries. IBM must balance the possibility of having incomplete data or choosing not to do business in that country (Boudreau 2011). IBM’s leadership will have to mitigate these challenges in their strategy, but with the information and the predictability provided by WMI, executives can evaluate different courses of action with and understanding of the factors that control outcomes.

The WMI allowed IBM to see their business, their employees, and their vendors, so they could integrate individual development and company strategy. Constant refinement of their strategy, guided by an understanding of their global business environment and their employee capability, makes an agile and adaptive business. The initiative provides IBM the intelligence to understand what is currently happening inside their company and the ability to forecast future requirements. IBM's HR can provide information regarding factors that impact change. Overall, the WMI cost 230 million dollars and resulted in a 1.5 billion, dollar return and it brought the company from the verge of bankruptcy to profitability (Boudreau 2011).

### IBM Step 3

IBM's WMI has a direct impact on all four areas identified by the Army's TMCOP. The information collection, analysis, and application allows IBM's executives to understand how actions affect their business and employees. The program's design simplifies the accession of employees and employees' ability to see what talent within IBM is in demand improves retention. Understanding talent demand enables IBM to develop talents they believe will be in demand in the future. In the short term, the WMI allows IBM to see their current available talent and fill current gaps.

Table 3. IBM TMCOP Core Function Assessment			
	Rating		
TM Core function			
Access			
Develop			
Employ			
Retain			

*Source:* Created by author.

The WMI streamlines the accession process for all IBM locations. Although IBM had to make individual considerations for each country with respect to privacy and protected classes, every application to IBM queries the same information from the applicant and it is placed in a database and immediately available. Information collected from applicants provided a greater understanding of talent availability in labor pools and the type of applicants that were interested in working for IBM. This information led to IBM's ability to look for talent inside the company and with local recruiting organizations. With information available detailing current employee characteristics, IBM can access talent with a greater chance of success in the company. Finally, the WMI provides IBM with a forecast of required talent based on strategy and trends in labor requirements so IBM can either develop or hire the required talent.

Increased retention from WMI is mutually beneficial for both employees and management. The WMI improves retention by directing employees on development paths that lead to future employment within the company based on predicted needs. Managers



counsel employees on talents that WMI predicts will be in demand three years from now. WMI program managers assess that in the future needs will change more rapidly, but employees are asked to stay flexible. In spite of the changing demand, WMI does provide information and predictability based on business signals from both inside and outside of IBM. Bottom up refinement and constant updates to the system with planning and strategy information provide the best possible indication of future requirements. Not only does it help employees remain at IBM, but also it ensures that spending rarely occurs on obsolete requirements.

The predictability WMI provides for future requirements allows executives and managers to develop employees with precise goals and improve business outcomes. When Sam Palmisano started at IBM in the 1970s, a policy existed, that IBM would not lay off employees. In today's market that is simply not possible, but IBM can make a promise using WMI that if an employee remains relevant to the talent market using WMI, they will remain relevant and enjoy advancement opportunities (Boudreau 2011). The system easily identifies employees who do not utilize it to highlight their talents, or managers that do not place their needs in the system. IBM provides 40,000 learning opportunities that utilize the taxonomy to help employees navigate their development. Managers guide subordinates through their development, armed with data to show employees IBM's current and future talent requirements. The WMI identifies trending requirements and deters employees from spending time and resources on un-needed requirements. This benefits IBM, but also the employee. If IBM does not require certain skillsets, it is unlikely other companies will either (Boudreau 2011). This system provides

employees fact based information to guide their decisions and it provides IBM with a forecast of required talents to remain adaptive to future needs.

The most direct cost saving measure offered by the WMI is the employment of available talent. Prior to the WMI, underutilization threatened IBMs existence. With the taxonomy and common language, employees with in demand talents move either virtually or physically to jobsites. Prior to the WMI, employees were underutilized. The company realized, after the implementation of the program, managers hired contractors to conduct work in areas where IBM retained talent. After WMI made employee talents easily queried, and provided a common language to describe requirements, the underutilization problem diminished (Boudreau 2011). This single connection of available to talent to requirements, across a global marketplace enabled IBM to return from the brink of bankruptcy and failure.

The WMI has direct impact on all four areas identified in the TMCOP and the implementation of analytics arguably saved the company. For a 230 million dollar investment over five years, the WMI resulted in 1.5 billion dollars of benefit (Boudreau 2011). The WMI led to a significant improvement, and its core function of allowing executives to see impact and measure effect has raised questions for the future. Executives understand the consequences of mobile talent and wage disparities, privacy issues, and the reduced need for HR personnel. They now have time to develop a strategy to mitigate these challenges before their impact. The WMI provides IBM with an advantage in a rapidly changing, competitive business sector. It is unlikely IBM could have achieved the same level of success or even survived without HCA provided by the WMI.

#### IBM Step 4

IBM achieves optimization in two of four TMCOP focus areas. Structured information, complete with analysis guides their decision-making processes. This allows them to make timely decisions to optimize two areas identified in the TMCOP and achieve predictive analysis and causation in retention and accession.

Table 4. IBM Human Capital Analytics Continuum							
Core Function	Anecdotes	Scorecards	Benchmarks	Correlation	Causation	Predictive Analysis	Optimization
Access					<b>X</b>		
Develop							<b>X</b>
Employ							<b>X</b>
Retain						<b>X</b>	

*Source:* Created by author.

#### Chrysler Step 1

Chrysler is the second of three case studies, and it is unique because the Chrysler executives had to prove impact to realize their vision for training sales consultants. This case study is narrower in scope and focuses on one specific problem where HCA contributed to the implementation of a training program. The Chrysler Academy develops and executes training for more than 3,000 dealers in the US. Dealers must pay to send their sales consultants to the Chrysler Academy, and a high rate of sales consultant turnover forced the dealerships to remain cautious with training resources. Although Chrysler could prove trained sales consultants outsold their untrained counterparts by 35

vehicles per year, the dealers had no proof that expensive training was the reason for increased sales. Marketing claimed it was due to their ads and the credit group believed the financing deals were the reason for increased sales (Pease, Byerly, and Fitz-enz 2013). Ultimately, Chrysler had to convince dealers of the training value to retain employees and sell more vehicles. They proved to the dealers the impact of training, controlled for other factors, with HCA.

### Chrysler Step 2

Chrysler's use of analytics results in the establishment of causation between training and increased sales. Further analysis of the study shows optimization of their training program. Live training for sales consultants at 3,000 different dealerships is expensive for Chrysler and the dealers alike. Chrysler had to ensure that dealers were willing to expend the capital to send sales consultants for training. Once Chrysler convinced dealers of the training's efficacy, Chrysler had to conduct analysis on where they could achieve the greatest impact with their limited resource of trainers (Pease, Byerly, and Fitz-enz 2013). Analytics allowed Chrysler to optimize the use of their academy and increase sales across the nation.

Chrysler's analysts used three metrics to determine the academy's effect on vehicle sales. The metrics used to study effect were new vehicle sales volume, sales satisfaction scores, and sales consultant retention. Their study took into account several controls, a few of which are dealer size, consultant tenure, consultant training history and manager to consultant ratio. The sample size for the study included 33,867 sales consultants. Once Chrysler controlled for other factors, they proved that 15.6 of the 35

additional vehicles sold per year by trained personnel were directly attributable to the training (Pease, Byerly, and Fitz-enz 2013).

Optimization occurred in the second step of Chrysler's use of HCA. Once Chrysler proved the benefit of sales consultant training, they had to optimize the use of limited training resources. Further analysis of sales consultant training revealed the greatest return on investment for sales consultant training occurred at larger dealers. The largest dealers had the greatest increase in sales (Pease, Byerly, and Fitz-enz 2013). With this information, Chrysler optimized the mutually beneficial relationship between Chrysler's corporate interests and the dealer's interests.

### Chrysler Step 3

Chrysler's use of HCA in this case is limited to direct impact on only development and retention. Although optimization in these two areas may have an effect on their ability to assess or employ talent, the case study does not reveal impact. Chrysler used analytics to prove to dealers that sales consultant training was worth their training dollars. Dealers did not believe alignment existed between their interests prior to the use of analytics and they were hesitant to make the capital expenditure on training. Chrysler proved training efficacy by demonstrating the impact of training isolated from other factors.

Chrysler proved the impact of development only through the collection of data in their learning management system. Two years of data covering thousands of dealers and sales consultants allowed them to prove the impact of their training program. Without this large quantity of data, called "big data", Chrysler could not establish causation between sales consultant training and increased sales. Dealers now had proof that development

resulted in greater sales. In addition, Chrysler also showed that having an untrained sales consultant actually causes the loss of 1.3 sales per year (Pease, Byerly, and Fitz-enz 2013). The other liability caused by a lack of training is increased turnover.

Dealers were concerned about the retention of sales consultants. Only 48% of sales consultants remain after their first 90 days of employment at a Chrysler dealership. Dealers were hesitant to invest in employees that were not likely to remain after three months. With the learning management system information available, Chrysler showed that even partial training increased the retention rate of new hires. Fully training a sales consultant reduces turnover by 99% (Pease, Byerly, and Fitz-enz 2013). The cost of hiring new sales consultants is not included in the case study, but turnover costs are considerable throughout many businesses. Dealers mitigate training cost through reduced turnover and increased sales. Chrysler as a corporation benefits by selling more vehicles and an understanding of the factors affecting data, analysis, and ultimately, optimization of employee development shows how stakeholders at the dealerships and executive level can benefit from HCA.

#### Chrysler Step 4

Using analytics, Chrysler achieved optimization in the development and employment of their sales consultants. This would not have been possible without the combination of data and analytics. Chrysler used Analytics to show causation between training and retention. The company did not impact accession of sales consultants at the dealers.

Table 5. Chrysler Human Capital Analytics Continuum							
Core Function	Anecdotes	Scorecards	Benchmarks	Correlation	Causation	Predictive Analysis	Optimization
Access			<b>X</b>				
Develop							<b>X</b>
Employ							<b>X</b>
Retain					<b>X</b>		

*Source:* Created by author.

### The Army Step 1

The US Army currently faces a complex strategic environment that will require agility and adaptation to meet future talent requirements, and they plan to optimize TM to meet those needs. The TMCOP identifies the need for an integrated approach to TM. A series of disintegrated TM efforts will not achieve the desired effect. Current human resource information systems provide an inadequate picture of talent, and may be an obstacle to optimizing the accession, development, employment, and retention of the most talented Army officers. Although the Army maintains the goal of optimizing TM, unfortunately, TM practices in the Army have changed little in 50 years (Shoffner 2016). Furthermore, recent TM efforts lack integration and some may have exacerbated the problem.

Accession policy and decisions have lasting impact that can affect the quality of the most senior leadership, 30 years in the future. Due to the unique nature of the profession of arms, it is not possible for the Army to hire the talent it needs to fill certain billets. The cohort of platoon leaders in any given year, contain the general officers of the

future. Accessing the right talent, rather than simply the required quantity of officers, requires an understanding of the talent pool of civilians available for service. Accessing civilians also requires an understanding of how to communicate in an effective manner with the prospective talent pool. Understanding how policies and procedures affect the population, will facilitate the accession of the most agile, adaptive, and qualified future leaders. It also reduces the amount of resources required to develop talent before employment. Accessing talented leaders can produce a self-feeding cycle that attracts other talented prospective officers (Wardynski, Lyle, Colarusso 2010a). Although leaders can make assessment decisions rapidly, their consequences are lasting and compounding.

The Army is unique in its expenditure of resources on talent accession and can spend just under 300,000 dollars to commission a West Point graduate and just under 250,000 dollars to commission a four-year ROTC graduate. Since officer accessions are uniquely costly and affect the force for up to 30 years, the Army must optimize accessions. To meet future needs, internal and external conditions have to factor in accessions policy. During the global war on terror, the shortage of officer talent led to increased reliance on accessions from officer candidate school, where the least flexibility exists to screen and cull talent. Officers originating from officer candidate school received the least number of top ratings in key developmental S-3 and XO billets, as well as in LTC command billets. Officers attending officer candidate school from the service also present a second cost, which is the removal of an NCO from the force. Optimizing accessions and increasing reliance on four-year commissioning sources provides the Army an increased ability to screen talent. Proper screening, vetting, and culling will increase the overall average performance of the officer corps (Wardynski, Lyle,



Colarusso 2010a). Increased opportunity to access the best talent is pivotal to the management of human capital.

Fighting and succeeding in close combat requires not only the accession of talent, but talent development grounded in an understanding of the uniqueness of each officer. Strict career paths regardless of an individual's talent or needs currently drive officer development. If an officer deviates from this path, they risk non-selection for promotion. Additionally, branch managers can only see an officer's capability based on the inventory of skill identifiers representing organizational education. The Army cannot see the breadth of the talent available, and it lacks a method to signal to officers that a specific talent is currently required or it is a projected requirement. Even if the Army had a method to do this effectively, there is risk associated with not adhering to the required path. The Army does not have the ability to tailor development paths for each individual officer, or an ability to understand what talent is currently resident in the officer corps (Wardynski, Lyle, Colarusso 2010b). Future uncertainty requires both agility to meet needs and branch managers that can see the breadth of talent resident in the force.

The Army has to be able to see the talent in order to employ it effectively, but current systems do not allow branch managers flexibility in the assignments of officers in their managed pool. The strict DA PAM 600-3 requirements force officers to adhere to pre-determined paths to increased responsibility and grade. As a result, the Army treats officers as interchangeable parts. Current assignment practices place emphasis on fairness of overseas deployment history over talent matching, eliminating either the officer or field commanders from having input. Officers know what talents they possess, and commanders know what talents they need, but branch managers make the assignments

with varying levels of input from either party (Shoffner 2016). In this method, officers are required to perform well in any job, regardless of their individual aptitude for that billet. This industrial era practice prevents optimal performance, and it may affect retention.

Further complicating both the understanding of the talent pool and the assignment of talent is the lack of depth in the current evaluation system. Senior raters can only provide a few sentences, usually dedicated to an officer's enumeration among their peers, a general statement on their performance, recommended schooling, and a broad recommendation on their future employment. This tells branch managers very little, if anything, about how this officer's talent would most benefit the Army and the officer. In addition to the limited narrative, the evaluation system forces distribution of officers into a bimodal distribution of those in the top 49 percent and the bottom 51 percent (Lyle and Colarusso 2014). Branch managers are left with this limited description and a bimodal distribution of officers from senior raters, many of whom have been selected to command by an Army level board. This limited input does little to assist in the ability of the Army to see its talent, let alone assign an officer into a billet that benefits both the Army and the officer.

After the Army invests its resources in the accession and development of officers, it is vital the most qualified talent remains in the Army. This not only provides a return on investment, but also ensures the most talented officers are available for positions of greater responsibility. In the early 2008, the Army offered an unprecedented cash retention incentive for Captains to remain in service for another three years. This practice is not aligned with a talent-focused strategy of retaining the most qualified officers. Many

captains chose to take the bonus, but there was no attempt made to offer the bonus to only the most qualified officers. Furthermore, the incentive paid many officers who intended to remain in service, regardless of the incentive. The Army did not understand why officers were leaving. Although the shortfall of captains was critical, and time was not available to optimize the incentives, there is still no enterprise level measure to understand what motivates officers to leave service (Wardynski, Lyle, Colarusso 2010d). Without understanding of where impact occurs based on policy, irreplaceable talent will continue to leave the service. Furthermore, officers that choose to remain in the military have no method to indicate the reasons they continue to serve. This, along with accession, has generational consequences. A talent-focused retention strategy is essential to maintain the most qualified talent, and not just the required number of officers.

### The Army Step 2

Research shows that the Army lies in the benchmarks portion of the HCA continuum. There is no evidence available the Army collects enough data, or applies enough analysis, to determine causation when evaluating a policy's affect or creating new policies. HRC uses benchmarks and conducts analysis following promotion and selection boards. Officers receive this analysis and can shape their career decisions with their branch managers. The Army does look at retention, training, and accessions benchmarks, but it is without an understanding of some of the factors affecting these benchmarks. To assign causation, the next step in the HCA continuum, the Army needs to collect more data to understand why and where impact occurs based on a given policy.

Currently, the Army does not collect data in enough volume to achieve causation or optimization. If an understanding of causation between policies and their consequences








does exist, OEMA and the Combined Arms Center did not identify its use in TM. The officer retention issue in 2008 demonstrates how actions taken at the enterprise level had unintended consequences. The majority of officers taking bonuses during that period intended to stay in the Army for at least three years regardless of any monetary incentive. The Army did not consider talent when distributing this retention incentive, all officers were eligible in a given year group. Policy makers did not understand or did not consider the long-term effects of this expenditure. The Army did not entice the officers with the greatest private sector opportunities, and likely the most potential for future success in the Army, to continue service. The Army did pay many officers, who intended to stay regardless of the monetary bonus. Based on the limited data the Army collects on officers besides “accounting data,” targeted incentives for the top performers is not possible. Enough data is not available to assign causation to enterprise level policies and procedures.

The Army is not developing the means to collect unstructured data in IPPS-A to accumulate a “fullness of life” on each officer. This would provide the opportunity to analyze a greater amount of data leading to more informed decision-making. Until HR systems collect enough data to analyze, evidence based decision-making cannot occur. The future consequences of a policy or incentive are difficult to evaluate without data and an understanding of the factors involved in talent decisions.

### The Army Step 3

The Army currently performs in an acceptable manner in each of the four TM core functions. The Army is reviewing and incrementally implementing new TM practices. In the case data from OEMA, the Army did not coordinate initiatives in each of

the four focus areas. Decisions made to improve accession or development occurred without consideration of the other focus areas or the long-term impact on the Army. Senior leadership developed TM policy with an incomplete understanding of the problem. In some cases, data and analysis was not thorough enough to demonstrate causation between current policy and the resultant impact on the officer population. An evidence basis for recommendations or prediction of future impact on officer populations was not possible without sufficient understanding and analysis.

Table 6. Army TMCOP Core Function Assessment			
Army	Rating		
TM Core function			
Access			
Develop			
Employ			
Retain			

*Source:* Created by author.

The Army does reach out to the millennial generation, where the accession of future talent occurs. The millennial generation shapes its perceptions of the Army through multiple sources, where they develop pre-conceived notions about the character of service as an Army officer (Wardynski, Lyle, and Colarusso, 2010a). The Army does not effectively counter this narrative with accurate information providing an impression of what it means to serve on a day-to-day basis. The Army must overcome this obstacle

with an understanding of the marketplace where the Army is competing for talent. Not only does the Army have to understand what the civilian sector offers, but share the benefits of military service. Accessions also require the vetting and culling of talent early on in the development process. Screening out mediocre talent in this stage creates the conditions for success in the other core functions of TM. HCA may assist the Army in developing a program to attract and screen the best talent for future success.

The public recognizes the Army as an organization dedicated to the development of talent in areas key to ensure units receive capable leaders. Unfortunately, the DA PAM 600-3 limits the amount of non-operational development time via its strict requirements and limited number of openings at institutional schooling. Developmental opportunities can reduce talent departure to the civilian sector. Graduate school opportunities for officers were much greater in the 1980s than they are today (Lyle and Colarusso 2014, 110). In a complex operational environment, the Army's developmental program does not create a breadth and depth of talent necessary to defeat current and future opponents.

Retention is the focus area with the greatest opportunity for improvement. Talent requirements do not drive retention policies, retention is driven by an end strength goal. The Army's goal to retain quantity regardless of quality has cascading effects that policy makers may not take into consideration. The Army competes with the civilian labor market. If opportunities for development and challenging assignments in an organization with other talented officers do not exist, the civilian sector takes advantage of the Army's development and recruits officers. The Army serves as a vetting agency for talented officers with unique leadership skills for the private sector. The Army could assess what talent might be in demand in the future and target retention incentives to the individuals

with that talent. Currently, retention incentives are not talent based and have a negligible effect on improving the management of talent.

The Army's TM program is working towards integrating improvements in the four focus areas with the development of IPPS-A and the initiation of the Talent Management Task Force. Based on OEMA's research, the Army's TM practices do not have significant, measurable impact on the goal of improving the accession, development, employment, or retention of officers. The effect of the TMCOP and other initiatives is currently unknown, but current practices utilize an industrial era model that prevents optimal TM. This causes the Army to react, rather than take proactive actions to ensure the force maintains a breadth and depth of talent.

#### The Army Step 4

The Army primarily uses benchmarks and scorecards to evaluate the effectiveness of HR policies to achieve goals. HRC does not collect data in a sufficient volume to provide analysts the ability to understand the effect of an action on the total force. As demonstrated by the Army case, only hindsight provides an understanding of what occurred or how policies affect the officer population.

Table 7. Army Human Capital Analytics Continuum							
Core Function	Anecdotes	Scorecards	Benchmarks	Correlation	Causation	Predictive Analysis	Optimization
Access			X				
Develop		X					
Employ		X					
Retain			X				

*Source:* Created by author.

#### All Cases Step 5

A comparison of each of the two civilian HR programs with the Army's is useful to evaluate how the use of analytics in the civilian sector may be useful to the Army. The civilian sector retains flexibility with how they implement TM programs and policies. Limited lateral entry and the specific talent requirements for increased responsibility in the military may dampen the impact of analytics. Furthermore, the Army's culture may be the greatest impediment to the implementation of new TM practices. Leaders heavily influence a new idea or program's success or failure by their willingness to commit to an initiative (Davenport, Harris, and Morison 2010). A comparison of cases and an assessment of the Army's TM policies and procedures facilitates a quantitative evaluation of HCA and its applicability, even though leader commitment is not measurable.

IBM's case demonstrates the importance of understanding the talent available in their organization. Their taxonomy of skills allows them to understand what skills are in demand, project what will be required in the future, and signal to their employees what development would lead to increased responsibility and further employment. IBM uses



HCA to create developmental plans for employees. Analytics provides both the managers and employees with some assurance that their sacrifices to endure training or credentialing programs will result in mutual benefits. The Army could use HCA to evaluate what talents they believe will be necessary in the future and provide clear signals to officers and encourage their development to benefit both the Army and the officer. Army officers currently have limited flexibility to attend training or fill billets that do not conform to their branch specific requirements for continued promotion.

The workforce taxonomy and developmental planning guided by analytics resulted in increased retention and more precise talent accession at IBM. Employees with aspiration for increased responsibility and development remain at IBM at a greater rate due to their use of HCA. IBM values these employees and seeks a return on their development investment, but these skills are also valuable with other companies should they separate from IBM. With the taxonomy established, IBM was able to access talent precisely where they would be incapable of growing it fast enough. Through the taxonomy, IBM translates strategic goals into talent requirements (Boudreau 2011). This applies to their use of contracted labor and the hiring of employees. The Army faces the same challenge to retain the most talented leaders, with the greatest opportunities in the civilian sector. In addition, the Army has reduced flexibility to use contractors in key developmental billets or access mid-career talent. Developing a taxonomy that provides a common language to translate the Army's strategic goals into talent requirements and signal to officers what talents are in demand, may increase retention.

Chrysler encountered a unique problem where improved development also drove retention. Their use of analytics demonstrated to their dealers using quantitative data how

valuable the training was to each dealer. Chrysler determined not only how many more vehicles per year a sales consultant would sell with training, but when was the most effective time to train a sales consultant. If combined with the workforce taxonomy, this analysis has the potential to increase retention and the effectiveness of training dollars in the Army. HRC lacks a method to measure how effective professional military education is at the enterprise level. OEMA uses the percentage of “top block” officer evaluations to assess the quality of officer from each commissioning source, but this is not precise enough to gauge the effectiveness of professional military education, especially when changes occur yearly to developmental programs. Changes in officer development programs and training lack an evidence basis for success. At the Command and General Staff College for example, staff and professors make changes every year based on student and field feedback, but these anecdotes do not provide a scientific basis to make important changes in officer development. HCA would provide a method to measure how training programs affect the officer population and provide diverse talent for the complexities of conflict.

Using HCA to optimize each of the four TMCOP focus areas will require adjustments to current TM practices and the collection and organization of more information to feed analysis and evidence based decision making in HCA. The case study revealed three areas that would require improvement in order to see what affect TM policies and procedures have on the population of Army officers. First, the Army officer evaluation report does not provide sufficient information on an officer’s performance to measure his or her talent or signal to branch managers what assignment would best fit an individual. Second, the Army’s new human resource information system, IPPS-A, is not

scheduled to facilitate the addition of unstructured, free text for an officer to describe their unique experiences or knowledge. Third, the DA PAM 600-3 limits career flexibility by requiring officers to perform in certain branch specific billets to be considered competitive for promotion. Regardless if an officer has greater potential in another billet based on his or her qualifications, they still have to serve in specific key and developmental assignments to continue their career. Recommendations on how to mitigate these gaps are provided in the following chapter.

Overall, IBM and Chrysler demonstrated the benefits of using HCA to implement an evidence basis for their decisions and optimize the use of their human capital and training resources. In IBM's case the WMI arguably prevented the failure of the company and increased development, retention, and reduced underutilization of trained employees. Chrysler demonstrated the value of HCA in a narrow area of employee development by proving to dealers the effectiveness of training on sales and retention. The Army's current TM practices do not demonstrate a comparable level of optimization. The unique nature of the Army's talent requirements is likely a factor in their industrial talent model. There are opportunities for the Army's improvement to optimize the core TM functions and maintain a talent overmatch against the nation's adversaries.

### Chapter Summary

IBM prevented the failure of their company with analytics, Chrysler optimized their sales consultant training with an evidence basis, but the Army does not currently use analytics to optimize HR policies or training at the enterprise level. Army leadership would have to abandon industrial-era TM practices in order to implement HCA. The primary obstacle to improvement lies in the culture of the Army and 50 years of

relatively minimal improvements in officer management. Chapter 5 contains a discussion of this and other obstacles to improvement.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### Chapter Introduction

As this analysis has shown, the answer to the primary research question “can the Army utilize human capital analytics to guide officer policy and optimize their investment into the officer corps?” is yes. HCA is one tool available with proven results that the Army could implement to optimize their investment in the officer corps. Given the unique nature of service as an Army officer it was not clear that civilian application of analytics would translate directly into Army TM and the research and analysis did reveal limitations. OEMA identified many challenges associated with TM and opportunities for improvement. The civilian sector has proven the usefulness of some of these TM initiatives, including HCA. Even though opportunities exist to improve TM in the Army, and their effectiveness is proven in the civilian sector, the greatest obstacle to implementing them in the Army is the culture.

After reviewing the literature and analyzing the cases, the civilian sector demonstrated the efficacy of HCA in both large, global organizations at the enterprise level, and in business segments to achieve a very specific objective. IBM was on the brink of failure before their WMI enabled them to optimize their TM procedures. Chrysler faced a unique burden to prove the effectiveness of their training program to encourage dealers to train sales consultants. Between these two cases, all four TM COP focus areas covered in this thesis were improved by the company. Although the Army has established the requirement for improved TM and dedicated resources to improve it, analytics is not identified as a major contributor to enhanced TM. Experience gained in

the private sector could serve as a starting point to link TM policy and action with impact in order to achieve the breadth and depth of talent the challenges of the future will require.

### Conclusions

This study determined that the Army does not currently collect or organize enough talent data to understand what talent is resident in the force. Analytics requires large amounts of structured data consolidated from many sources (Davenport, Harris, and Morison 2010). Although the Army is fielding a new HR information system, IPPS-A, it is not scheduled to provide officers or supervisors the opportunity to submit free text and showcase talent not captured by structured responses in menus (Shoffner 2016). The officer evaluation report is a missed opportunity for raters to truly identify an officer's individual talents. Branch managers and senior leaders would benefit from the ability to query a database complete with rater and rated officer input regarding their specific talents. Collection and organization is just the first step in the use of analytics. Analysis is vital to the understanding of where impact is occurring based on both internal and external influences.

Analysis of the Army's TM program and talent pool is the only way to understand all the factors that impact the management of the officer corps. The Army's actions in the past represent time inconsistent behavior. Short term solutions to talent pool size or training issues result in impact years from now. Instead of optimizing the talent pool through analysis, the Army tends to want to push officers out, or assess more to fill a gap irrespective of talent considerations (Wardynski, Lyle, and Colarusso 2010d). Leaders can only make optimal decisions following an understanding of factors involved after

thorough analysis is complete and causation is established. Although this may result in policies and decisions that do not solve an immediate issue, leaders will have the knowledge and understanding to make a deliberate choice regarding immediate vs current need. Analysis will provide an understanding of factors in more areas than retention, and it is only possible with sufficient data collection.

The third conclusion is the Army's culture prevents change with respect to TM. The Army has used, essentially the same method of assigning officers since the conclusion of the Vietnam War (Shoffner 2016). The DA PAM 600-3 acts as a manifestation of this cultural belief. Branches restrict officers to serve in specific billets. If deviation occurs, officers risk separation after non-selection. Army leadership, at the enterprise level, has to change the culture to implement HCA or any other TM initiative. Without change at this level, recommendations from OEMA, the TM task force, or this thesis will likely have little benefit.

Over 50 years of using essentially the same assignments process created the espoused belief that the current system is relatively effective. Edgar Schein, a former professor at MIT, analyzes organizational culture and proposes there are three levels of culture. The second level is the espoused beliefs and values. These values answer the questions "why are we doing things our way" or "what rationalizations are used to explain the organization's behavior?" (Schein 2010). Although OEMA wrote about the change needed and the TM taskforce was created to "integrate and synchronize Army efforts to acquire, develop, employ and retain a high-quality force," cultural change will not occur without senior Army leader involvement (G-1 2016). Senior Army leaders must shape thinking and behavior regarding TM within the force by utilizing Schein's primary

embedding mechanisms. These actions by senior leader will help align the TM espoused beliefs with underlying values eventually producing cultural change opening the door for better TM.

The DA PAM 600-3 is not the primary obstacle to improving TM, but it does reinforce the values of the organization and it impedes change. The DA PAM 600-3 is what Schein calls an “indirect action tool”--a tool that reinforces the primary espoused beliefs and values. These secondary reinforcement mechanisms must come in support of senior leader primary embedding mechanisms, not before or in place of these actions. Branch managers are evaluated on their ability to fill valid requisitions for officers based off guidelines in the DA PAM 600-3 and not based on their ability to match talent. The assignment process, as it stands, constantly reinforces the culture to the managed population of officers (Schein 2010). To eliminate the DA PAM as an indirect action tool, the culture of the Army at the senior level will have to demonstrate commitment to TM.

### Recommendations

In order to facilitate the future use of analytics, IPPS-A must collect more data than current systems and store it for future use. The civilian sector currently uses HCA to great effect, but the Army may take some time to adopt its use. Without large amounts of data ready for analysis, it will take years to implement analytics use once the decision is made, if data has not already been collected and archived for analysis. IPPS-A is still in development, and the Army should maximize the program’s data collection, even if it requires a delay in the introduction of IPPS-A. Data collection and organization is the key to analytics, as demonstrated in the civilian sector. Both IBM and Chrysler allocated



significant resources and time to collecting data prior to their implementation of analytics. The Army should begin data collection now even if there is not a current plan to use analytics to increase future agility.

The current evaluation system should provide an opportunity to collect talent data from command selected officers regarding their subordinates. As it stands, the evaluation provides an extremely limited amount of information regarding an officer's talent. A senior rater only has the opportunity to share a few sentences about a subordinate and that information normally focuses on an officer's potential for increased responsibility and attendance to future professional military education. Although there is a section dedicated for a senior rater to recommend future positions, the recommendations are broad in nature. Boards use these recommendations as a further indication of potential for promotion and command selection than to recommend an officer for a specific billet based on their unique talents. The evaluation should have another opportunity for a senior rater to describe a subordinate's specific talents and make recommendations for their career. Even if this information is hidden to boards, it would be available to branch managers and assist them in making a talent match. Currently there is a draft Academic Evaluation Report with a similar focus. This draft DA 1059-2 requires instructors and professors at the Army's academic institutions to highlight a student's key skills and abilities relevant to future positions. Current officer evaluations squander the opportunity for a senior rater to provide such insight to a career manager.

In order to implement HCA, or any other TM initiative, senior leaders will have to change the culture associated with current TM practices. A multi-component approach with several TM proposals will increase the overall effectiveness of TM in the Army. The

obstacle to implementing HCA, is the culture of the Army. Senior leaders have the greatest potential to change the culture of the Army based on their focus. Reviewing the cases in this thesis demonstrates that pressure is a significant impetus to a culture shift. IBM faced certain bankruptcy and failure if they did not implement the WMI. Chrysler also faced fiscal challenges that analytics mitigated. Militaries may only face this pressure when confronted with a near peer enemy or after a defeat. Germany, following World War One, faced this pressure to change their culture and value system. As a result, their interwar innovation was arguably much greater than that of the US or the British (Murray and Millet 1996, 36). The current US Army is not facing similar pressure following a defeat. It will be incumbent upon the leaders to seize the opportunity to implement change in the absence of such pressure. Schein states that success is a reinforcement mechanism to an existing culture and the Army's relative tactical success in Desert Storm and the Global War on Terror reinforce current TM practices (Schein 2010, 217). Improved TM, specifically HCA, is likely to increase readiness and enhance training, but implementation will require a culture shift.

Senior leaders have the ability to shift culture by allocating resources and focusing on the benefits of improved TM. Schein defines this practice as a primary embedding mechanism. These mechanisms show organizations how to perceive, think, feel, and behave. Examples of primary embedding mechanisms that would apply most to the TM culture "are what leaders pay attention to", "how they allocate resources", and "deliberate role modeling, teaching, and coaching" (Schein 2010, 293). Of the senior leaders that spoke to the CGSC class of 2017, only a few focused on the need for improved talent management, even though TM is directly related to readiness of the

force. Leaders underpin culture with what Schein calls secondary reinforcement mechanisms. Secondary reinforcement mechanisms reinforce current culture, but are not usually the genesis of a new or shifted culture (Schein 2010, 250). These reinforcement mechanisms are the policies and procedures that enforce the beliefs espoused by an organization. In the Army, the example of this is the DA PAM 600-3, which limits the flexibility an officer or branch manager has to match talent. It provides a singular path to continued promotion and success. In order to change the culture and improve TM, senior leaders will have to use primary embedding mechanisms to shift the culture and lead the force to increased readiness and overmatch.

In order to change the culture and implement HCA, senior leaders will have to use the primary embedding mechanisms to shape perceptions regarding the TM program use of HCA. This embedding mechanism is “what leaders pay attention to”. USMA already uses improved accessions to precisely match cadets to a career field where they possess the required talent. Improved accessions will affect the force for an entire generation, but senior leaders do not highlight the potential impact of such improvements. Instead, officers are left to develop their own narrative of how TM occurs. These anecdotes may not represent all that the Army is doing to improve TM, but without senior leadership showcasing improvements and driving the narrative, the culture will remain unchanged. If officers are given career flexibility and are rewarded for contributing within their unique skillset, this will embed the idea that career flexibility is possible without damaging an officer’s potential for promotion and continued success. In order to change the culture and open the possibility to the acceptance of TM initiatives and HCA, senior

leaders need to discuss these efforts and their potential benefit to the readiness of the force.

### Recommendations to Future Researchers

The collection of significant amounts of data may have ethics implications. If HCA is used, the army will have to collect and store large amounts of personally identifiable information that may make some uncomfortable. The database would be a prime target for criminals, and foreign intelligence services. The Army would have to improve methods to compartmentalize access and demonstrate the payoff of collecting information to justify methods (Schneider, Lyle, and Murphy 2015) Research should determine whether the collection of data will be acceptable to a prospective or existing Soldier.

If HCA is beneficial, the Army will need to begin collection of data relevant to the specific knowledge, skills, and abilities that Army Officers require. Future researchers should evaluate what instruments are the best indicators of future performance specific to the Army. Civilian sector comparisons might serve as a guide, and comparison to the civilian sector would provide insight to guide Army educational institutions in the selection of evaluation instruments.

### Final Thoughts

The US cannot maintain its technical advantage indefinitely. Enemies of the US will have similar access to technology and reduce the overmatch it provides. Leaders should take the opportunity to acquire an advantage over the enemy utilizing TM. Without an understanding of the talent resident in the force, and a TM program to

optimize the accession, development, employment, and retention of talent it will be difficult to overcome Army Warfighting Challenge #10. Future conflict will require agile and adaptive leaders to excel in complex environments and TM presents an opportunity to select and develop talent to meet this need.

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